



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,875	11/20/2003	Hiroaki Hyuga	Q78559	5633
23373	7590	07/13/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			SHENG, TOM V	
			ART UNIT	PAPER NUMBER
			2629	

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/716,875	Applicant(s) HYUGA, HIROAKI	
	Examiner Tom V. Sheng	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20 is/are allowed.
- 6) ☒ Claim(s) 1 and 5-19 is/are rejected.
- 7) ☒ Claim(s) 2-4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/20/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 11-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As for claim 11, it is unclear with regard to the limitation "light emitting elements of a number corresponding to spectral sensitivity of a photosensitive material to be exposed and luminous intensities of the light emitting elements are arranged so as to align along the sub scanning direction." The Examiner could not understand which type(s) of light emitting elements and how many per type and how the different types are being aligned along the sub scanning direction. Claims 12-19 are dependent on claim 11.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

Art Unit: 2629

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 5, 6 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Jongman et al. (US 2004/0021423).

As for claim 1 and dependent claims 6 and 9, Jongman teaches an exposure apparatus (graphic display incorporating organic light emissive materials; paragraph 5) comprising:

a light emitting element array (inherent in a passive matrix-driven display; paragraph 15) in which plural types of light emitting elements having different emission spectrums are arranged (first and second electroluminescent elements having different brightness versus driving voltage characteristics; fig. 3; paragraph 12);

a control unit for generating control signals (inherent) for causing the plural types of light emitting elements to emit light respectively in predetermined luminous intensities according to the types of light emitting elements (red EL elements are driven at voltage V1 for brightness B1 and blue EL elements are driven at voltage V2 for brightness B3; paragraphs 12-14) so that degradation rates are substantially equal among the plural types of light emitting elements (in order to equalize the rates of decay of the red and blue EL elements, the driving pulse width of the red EL elements is longer than that of the blue EL elements; paragraphs 11 and 15); and

a drive unit for independently driving the plural types of light emitting elements (inherent in order to drive any matrix display), respectively, based on the control signals generated in the control unit (it is well known in the art that a graphics controller sends timing and data signals to a data driver and a row scan driver).

Art Unit: 2629

As for claim 5, Jongman further teaches that third electroluminescent elements (for example, green) may be added (paragraphs 19 and 20). With the three primary color type electroluminescent elements, a full color image can be formed for a photosensitive material (such as a photographic film).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jongman.

As for claims 7 and 8, laser diode and light emitting diode are both similar to and commonly used as the electroluminescent element for use in emissive display or exposure devices. Official Notice is taken of that both the concept and advantages of using laser diode and light emitting diode in emissive display or exposure devices. It would have been obvious to use any one of the three depending on characteristic, application and cost considerations.

As for claim 10, silver halide is a common color photosensitive material.

Allowable Subject Matter

Art Unit: 2629

7. Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claim 20 is allowed.

9. The following is a statement of reasons for the indication of allowable subject matter: none of the prior arts of record teaches the limitations

“a filter disposed between the light emitting element array and a photosensitive material to be exposed, and having transmittance adjusted so that exposure intensity corresponding to spectral sensitivity of the photosensitive material can be obtained” of claim 2,

“wherein the control unit computes cumulative emission amounts with respect to each of the plural types of light emitting elements, and at the time of exposure, generates control signals for causing the plural types of light emitting elements to emit light according to image data, and, after exposure is finished, in order to make a cumulative emission amount of a light emitting element having the greatest cumulative emission amount and cumulative emission amounts of other light emitting elements equal with respect to all of the plural types of light emitting elements, generates control signals for causing at least one of the other light emitting elements to emit light” of claim 3,

“a light amount detecting unit for detecting exposure light amounts of the plural types of light emitting elements, wherein the control unit generates control signals for maintaining the exposure light amounts of the plural types of light emitting elements at

Art Unit: 2629

predetermined values” of claim 4, and

“wherein the control unit computes cumulative emission amounts with respect to each of the plural types of light emitting elements, and at the time of exposure, generates control signals for causing the plural types of light emitting elements to emit light according to image data, and, after exposure is finished, in order to make a cumulative emission amount of a light emitting element having the greatest cumulative emission amount and cumulative emission amounts of other light emitting elements equal with respect to all of the plural types of light emitting elements, generates control signals for causing at least one of the other light emitting elements to emit light” of claim 20.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Luciano, Jr. et al. (US 6,541,921) teaches compensating the effects of display aging and color variation by adjusting the intensities of individual EL elements.

Hashimoto (US 6,633,270) teaches compensating the difference in degradation between types of EL elements by providing individual column bias voltage for each type (color).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V. Sheng whose telephone number is (571) 272-7684. The examiner can normally be reached on 9:00am - 6:00pm.

Art Unit: 2629

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tom Sheng
June 29, 2006

AMR A. AWAD
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read "Amr A. Awad", with a large, sweeping flourish extending to the right.